

## Abstract

The gain control signal generating unit generates a gain control signal, using a signal yielding the greatest level among  
5 signals of the respective signal processing units. The gain standardizing unit stores, in the offset storage units, offsets corresponding to gain deviations occurring in the respective signal processing units when gains of the variable gain amplifiers are uniformly controlled using the gain control signal. The  
10 offsets are added to the gain control signal for each signal processing unit, and the variable gain amplifiers are controlled, using the respective offset-added gain control signals. Under the control of the calibration control unit, the calibration signal supply unit and offset determining unit supply a calibration  
15 signal and a gain control signal for calibration, respectively. The offset determining unit determines offsets to standardize the levels of signals of the signal processing units, and updates the offsets storage units with the determined offsets.